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## PATENT ABSTRACTS OF JAPAN

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MOTOMA NOBUHIRO****(54) ORGANIC-FILM LIGHT EMITTING ELEMENT**

(57) Abstract:

**PURPOSE:** To make one picture element emit rays of light of multiple colors by allowing electrons to be tunnel-injected into the second organic film and holes to be tunnel-injected into the first organic film to respectively make light emitting recombination.

**CONSTITUTION:** This organic-film light emitting element is constituted of the first electrode ( $M_1$ ) 5, first organic film ( $O_1$ ) 4, second organic film ( $O_2$ ) 3, and second electrode ( $M_2$ ) 2 in the descending order. The second electrode 2 is a transparent electrode of ITO, etc., formed on, for example, a glass substrate 1 and light is taken out from the substrate 1 side. Barriers to electrons and holes are formed at the joining boundary of the films 4 and 3 and, when a bias voltage which makes the electrode 2 positive is applied across the electrodes 5 and 2, electrons are injected into the first organic film 4 from the first electrode 5 and holes are injected into the second organic film 3 from the second electrode 2. Thus the electrons and holes are tunnel-injected into the organic films and make light emitting recombination in the organic films, resulting in the light emission of a wavelength determined by the

first organic film and the light emission of another wavelength determined by the second organic film.

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